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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Don Eadie

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EXAMINER

AUNG, SAN M

ART UNIT

PAPER NUMBER

3657

NOTIFICATION DATE

DELIVERY MODE

01/20/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/581,268	<b>Applicant(s)</b> EADIE ET AL.	
	<b>Examiner</b> SAN AUNG	<b>Art Unit</b> 3657	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 1-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This communication is a Fourth Office Action Final rejection on the merits.

Claims 1-42, as originally filed, are currently pending and have been considered below.

#### ***Response to Amendment***

The amendment filed November 19, 2010 has been entered. Claims 1-26 have been previously cancelled and no amendment has been made. Therefore, claims 27-42 are now pending in the application.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 27, 33-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US Patent 5,477,941), and further in view of Clyne K. M. et al. (WO-0118558 A1, from IDS) and Gray (US Pub. No.: 2002/0072833 A1).

**As per claim 27**, Kumar discloses On-Board Lubrication System for Direct Application to Curve and Tangent Railroad Track comprising:

an applicator (14) for application of the liquid composition (Figure 3); and  
a processing device for receiving the topological information, and controlling the application of the liquid composition, wherein control of the application of the liquid composition is based on the topological information received by the processing device (Column 5, Lines 1-11 )

However, Kumar fails to explicitly disclose that,  
a topological device comprising a global position system (GPS) for acquiring topological information of a rail system in real-time; and  
the processing device is accessed remotely at a site separate from a train consist in the rail system.

Clyne discloses Method and Apparatus for Measuring Navigational Parameter of a Locomotive comprising:

a topological device comprising a global position system (GPS) for acquiring topological information of a rail system in real-time (Page 6, Line 24-page 7, line 8).

However, Kumar and Clyne both silent about the processing device is accessed remotely at a site separate from a train consist in the rail system.

Gray discloses Track Database Integrity Monitor for Enhanced Railroad Safety Distributed Power comprising:

the processing device is accessed remotely at a site separate from a train consist in the rail system (Gray disclosed that remote monitoring facility 31 and position-determining device 28, paragraph 21, and also disclose that present invention also discloses a method for remotely controlling a locomotive, paragraph 11).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar to include the a topological device comprising a global position system (GPS) for acquiring topological information of a rail system in real-time as taught by Clyne in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to

the rail and also to use processing device is accessed remotely at a site separate from a train consist in the rail system as taught by Gray in order to provide an enhanced railroad safety and control the application of the lubricant any remote region efficiency and can stop immediately in case of emergency and quickly and reliable meet the need for a track database integrity monitor as part of an enhance railroad lubrication.

**As per claim 33**, Kumar discloses the processing device comprises a database having topological information of the rail system (Column 5, Lines 1-7).

However, Kumar fails to explicitly disclose that the processing device coordinates the topological information acquired from the GPS with the topological information of the database for controlling the application of the liquid composition.

Clyne discloses the processing device coordinates the topological information acquired from the GPS with the topological information of the database for controlling the application of the liquid composition (Page 6, Line 24- page 7, line 9, and page 9, lines 5-8).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar to include the processing device coordinates the topological information acquired from the GPS with the topological information of the database for controlling the application of the liquid composition as taught by Clyne in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 34**, Kumar discloses the processing device comprises one or more than one electronic component selected from the group consisting of a microprocessor,

a programmable logic controller, a computer, and a combination thereof (Column 5, Lines 1-7, and Figure 5).

**As per claim 35**, Kumar discloses the one or more than one electronic component has an operator-actuated interface (Column 6, Lines 15-22).

**As per claim 36**, Kumar discloses all the structural elements of the claimed invention but fails to explicitly disclose the topological information received by the processing device for controlling the application of the liquid composition is selected from the group consisting of orientation of the rail car in the rail system, speed of the rail car, curve sensing, changes in elevation, and a combination thereof.

Clyne discloses the topological information received by the processing device for controlling the application of the liquid composition is selected from the group consisting of orientation of the rail car in the rail system, speed of the rail car, curve sensing, changes in elevation, and a combination thereof (Page 6, line 24- page 7, Line 8, and page 9, lines 5-8).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar to include the topological information received by the processing device for controlling the application of the liquid composition is selected from the group consisting of orientation of the rail car in the rail system, speed of the rail car, curve sensing, changes in elevation, and a combination as taught by Clyne in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 37**, Kumar discloses all the structural elements of the claimed invention but fails to explicitly disclose the topological information acquired by the GPS and received by the processing device is selected from the group consisting of latitude, longitude, speed, heading, altitude, and a combination thereof.

Clyne discloses the topological information acquired by the GPS and received by the processing device is selected from the group consisting of latitude, longitude, speed, heading, altitude, and a combination thereof (Page 6, line 26-page 7, line 4).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar to include the topological information acquired by the GPS and received by the processing device is selected from the group consisting of latitude, longitude, speed, heading, altitude, and a combination as taught by Clyne in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 38**, Kumar discloses the GPS provides the processing device with topological information regarding speed of the rail car in the rail system to control a rate of application of the liquid composition (Column 5, Lines 38-42).

However, Kumar fails to explicitly disclose that GPS provides the topological information.

Clyne discloses a topological device comprising a global position system (GPS) for acquiring topology information of a rail system in real-time (Page 6, line 24- page 7, line 8).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar to include the topological device and which comprising a global position system (GPS) for acquiring topological information of a rail system in real-time as taught by Clyne in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.

**As per claim 39**, Kumar discloses, provides the processing device with topological information regarding changes in position of the rail car in the rail system to determine whether or not the rail car is negotiating a curved portion of a rail track in the rail system and the processing device controls application of the liquid composition accordingly (Column 5, Lines 38-42).

However, Kumar fails to explicitly disclose that GPS provides the topological information.

Clyne discloses a topological device comprising a global position system (GPS) for acquiring topological information of a rail system in real-time (Page 6, line 24-page 7, line 8).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar to include the topological device and which comprising a global position system (GPS) for acquiring topological information of a rail system in real-time as taught by Clyne in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail.



**As per claim 40**, Kumar as modified by Clyne discloses all the structural elements of the claimed invention but fails to explicitly disclose the GPS provides the processing device with topological information regarding changes in elevation of the rail car in the rail system to determine whether or not the rail car is negotiating an inclining or declining segment of a rail track in the rail system and the processing device controls application of the liquid composition accordingly.

Gray discloses the GPS provides the processing device with topological information regarding changes in elevation of the rail car in the rail system to determine whether or not the rail car is negotiating an inclining or declining segment of a rail track in the rail system and the processing device controls application of the liquid composition accordingly (Paragraph 26).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar as modified by Clyne to include the topological information regarding changes in elevation of the rail car in the rail system to determine whether or not the rail car is negotiating an inclining or declining segment of a rail track in the rail system and the processing device controls application of the liquid composition accordingly as taught by Gray in order to provide quickly and reliably meet the need for a track database integrity monitor as part of an enhance railroad lubrication.

**As per claim 41**, Kumar discloses a method of applying a liquid composition in a rail system using the liquid composition application system of claim 27 (Column 5, Lines 1-61)

**As per claim 42**, Kumar discloses On-Board Lubricating System for Direct Application to Curve and Tangent Railroad Track comprising:

providing the liquid composition application system of (Figure 5); and  
wherein control of the application of the liquid composition is base on the topological information received by the processing device (Column 5, Lines 1-11).

However, Kumar fails to explicitly disclose that:

acquiring topological information of the rail system in real-time using the GPS; processing the topological information remotely at a site separate from the train consist in the rail system and controlling application of the liquid composition using the processing device.

Clyne discloses acquiring topological information of the rail system in real-time using the GPS (Page 6, Line 24 - page 7, line 9, and page 9, line 5-8).

However, Kumar and Clyne both silent about processing the topological information at a site separate from the train consist in the rail system and controlling application of the liquid composition using the processing device.

Gray discloses the processing device is accessed remotely at a site separate from a train consist in the rail system (Gray disclosed that remote monitoring facility 31 and position-determining device 28, paragraph 21, and also disclose that present invention also discloses a method for remotely controlling a locomotive, paragraph 11).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar to include the topological device and which comprising a global position system (GPS) for acquiring

topological information of a rail system in real-time as taught by Clyne in order to provide an accurate heading and advantageously be use to reduce usage of lubricant applied to the rail and also to use processing device is accessed remotely at a site separate from a train consist in the rail system as taught by Gray in order to provide an enhanced railroad safety and control the application of the lubricant any remote region efficiency and can stop immediately in case of emergency and quickly and reliable meet the need for a track database integrity monitor as part of an enhance railroad lubrication.

**4. Claims 28-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US Patent 5,477,941) as modified by Clyne K. M. et al. (WO\_0118558 A1, from IDS) and Gray (US Pub. No.: 2002/0072833 A1) as applied to claim 27 above, and further in view of Kast et al. (US Patent 6,578,669 B2).

**As per claim 28**, Kumar discloses:

one or more than one reservoir for holding the liquid composition (50, 51, Figure 5);

a pipe connected to the one or more than one reservoir (13, Figure 5);

one or more than one dispensing nozzle (17, 18, Figure 5).

However, Kumar fails to explicitly disclose a pump, in fluid communication with the pipe, for moving the liquid composition from the one or more than one reservoir to the one or more than one dispensing nozzle.

Kast discloses Rail Lubrication System comprising: a pump (38, 64), in fluid communication with the pipe, for moving the liquid composition from the one or more than one reservoir to the one or more than one dispensing nozzle (Figure 2).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar as modified by Clyne and Gray to include the pump, in fluid communication with the pipe, for moving the liquid composition from the one or more than one reservoir to the one or more than one dispensing nozzle as taught by Kast in order to provide continuously supply of a lubricant along the lubricant path and can apply relatively thick rail lubricant to the rail.

**As per claim 29**, Kumar as modified by Clyne and Gray discloses all the structural elements of the claimed invention but fails to explicitly disclose the processing device comprises a controller for controlling operation of the pump.

Kast discloses the processing device comprises a controller for controlling operation of the pump (by means of controlling electric motor, Figure 2).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar as modified by Clyne and Gray to include the pump and the processing device comprises a controller for controlling operation of the pump as taught by Kast in order to control the application of the lubricant efficiently and provide continuously supply of a lubricant along the lubricant path and can apply relatively thick rail lubricant to the rail.

**As per claim 30**, Kumar discloses the controller is selected from the group consisting of a programmable logic controller, a microprocessor and a computer (Column 5, Lines 1-7, and Figure 5).

**As per claim 31**, Kumar as modified by Clyne and Gray discloses all the structural elements of the claimed invention but fails to explicitly disclose the processing device comprises a metering device for controlling operation of the pump.

Kast discloses the processing device comprises a metering device for controlling operation of the pump (60, Column 4, Lines 60-67, and Figure 2).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the railroad lubricating system of the Kumar as modified by Clyne and Gray to include the metering device for controlling operation of the pump as taught by Kast in order to control the necessary lubricant amount effectively.

**As per claim 32**, Kumar discloses a source of pressurized air connected to the one or more than one dispensing nozzle to dispense the liquid composition as an atomized spray (Column 6, Lines 23-26).

### ***Response to Arguments***

3. Applicant's arguments filed November 19, 2010 have been fully considered but they are not persuasive.

In page 3 of REMARK, the applicant argued that, "Applicants submit that cited prior art taken alone, or combination, do not teach the missing element as defined in claim 27, in which using the processing device to control the application of the liquid composition is based upon the topological information received by the device', and in

page 4 of REMARK, the applicants argued that, "neither Kumar or Clyne teach of using a processing device to receive topological information and controlling the application of a liquid composition as defined in claim 27', and finally, in page 5 of the REMARK, the applicants argued that, The distribution power system for remotely controlling a locomotive of Gray is not a processing device that receives topological information from the GPS and controls application of the liquid composition based on the topological information received".

In response to applicant's argument, the examiner respectfully disagrees. Kumar discloses applicator for liquid composition to applied the rail (column 3, lines 45-52, Figure 3) and also discloses in column 5, lines 1-11, microprocessor (that is processing device) base on received eight input (that is topological information). Again, Clyne discloses lubrication system for rail track using GPS system (from page 6, line 24 to page 7, line 8). It inherently includes that kind of processing device to operate the lubricating system which received the data from GPS. Finally, the examiner did not teach the entire system of the Gray. The examiner control systems which can remotely control the train separate from the train consist in the rail system. Gray discloses in paragraphs 11 and 21, a method for remotely controlling a locomotive.

Both, Kumar, Clyne and Gray are system for train and track. Therefore, combination of Clyne and Gray system to the Kumar lubricating system provide advantageously be use to reduce usage of lubricant applied to the rail. Therefore, the rejection of claim 27 over Kumar further in view of Clyne and Gray is proper and maintained the rejection.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAN AUNG whose telephone number is (571)270-5792. The examiner can normally be reached on Mon-to- Fri 7:30 am- to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3657

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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